PARASITES OF ARCHIPS CERASIVORANA FITCH.

While collecting at Bennington, Vt., from June 18–24, 1915, I found the webs of the Cherry-tree Ugly-nest Tortricid (*Archips cerasivorana*) quite abundant on the wild cherry along the hedge rows. Bringing home six of the nests to ascertain to what extent they were parasitized, the following insects emerged between July 6 and 12. Moths 302. Dipterous parasites: *Dichætoneura leucoptera* Johns. 104 and *Neopales tortricis* Coq. 2. Hymenopterous parasites: *Bassus agilis* Cress. 6, and *Labrorychus prismaticus* Nort. 26. The latter was also bred in considerable numbers from the same species at Winchendon, Mass., by the late Dr. F. W. Russell. *Itoplectis* (*Pimpla*) *conquisitor* Say. was bred from nests taken by the writer at Milford, N. H., July 5, 1914. I am indebted to Mr. H. L. Viereck for the determination of the Hymenopterous parasites.

C. W. Johnson.

A NEW ANT OF THE GENUS MESSOR FROM COLORADO.

By Hazel Andrews,
University of Colorado, Boulder, Colo.

A few years ago Prof. T. D. A. Cockerell collected four workers of this ant at Glenwood Springs, Colo., not noticing at the time that they were anything unusual. Recently, while working on the genera *Messor*, *Aphœnogaster*, and *Pogonomyrmex*, we found these specimens mixed with the series of *Pogonomyrmex occidentalis* which they superficially resemble. It was evident that they could not belong to *Pogonomyrmex*, on account of the impressed dorsal suture and other characters, and on looking up the literature we failed to find any similar species described. Dr. W. M. Wheeler, who kindly examined a specimen confirms the species as new, and considers that it must be referred to *Messor* rather than *Aphœnogaster*. He further notes that it presents some characters suggesting that it may, in a certain sense, be regarded as intermediate between *Messor* and *Pogonomyrmex*.

Messor lobognathus sp. nov.

Worker: Length, about 6 mm. Head quadrate, about as wide as long, excluding mandibles. Posterior corners of head rounded, vertex almost straight, sides almost straight and parallel. Surface of head with sparse hairs, rugose, with rugæ posteriorly divergent; interrugal spaces distinctly reticulate. Clypeus very short with rugose surface, ridges irregular; shallowly emarginate anteriorly. Mandibles stout and convex, peculiarly lobed apically, with two large apical teeth and five to seven rudimentary teeth; surface coarsely striated. Eyes moderate, at sides of head, about half way between clypeus and vertex. Antennæ 12-jointed, hairy; scape compressed and dilated at base, hardly extending beyond corners of head; last four joints of funiculus incrassate, but hardly forming a distinct club. First joint longer than second, but not twice as long. Pronounced beard of recurved hairs, as in *Pogonomyrmex*. Thorax slender, irregularly rugose, sparsely clothed dorsally with long, glistening, light yellow hairs. Pro- and meso-notum convex. Thoracic dorsum deeply impressed at mesoepinotal suture; mesoepinotal suture distinct. Spines of epinotum acute, much longer than broad at base; divergent; striations radiating from the base; infraspinal cavity smooth. Petiole punctate with a few hairs; longer than wide; ventral surface straight in profile; a high posteriorly placed superior node; apex broader than base; posterior slope abrupt; anterior slope long and gentle. Postpetiole narrow at base, a little longer than wide when seen in profile; superiorly convex and sides rounded. Thus the postpetiole is globose. Gaster shining, scarcely larger than head, with delicate microscopic reticulate sculpture on apical part of segments. Sting vestigial. Legs quite long; posterior tibial spurs spinulose.

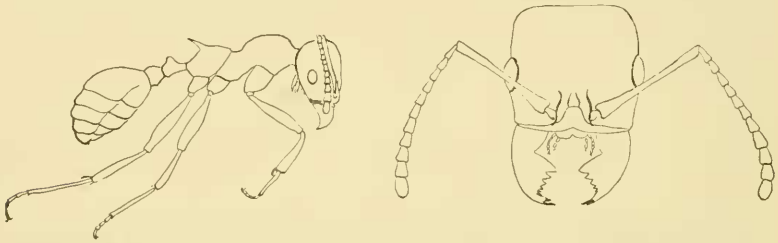

Fig. 1. *Messor lobognathus* sp. nov. Lateral view and anterior view of head.

Bright rufo-fulvous; tip of gaster light brown; clypeus, funiculus, clypeus and borders of mandibles brown.

Glenwood Springs, Colo., altitude 5,750 feet (Cockerell).

Superficially the ant resembles *Pogonomyrmex occidentalis* Cresson, but, as noted by Dr. Wheeler, the impressed thorax, shape of petiole, vestigial sting and non-pectinated posterior tibial spurs put it in the genus *Messor*. From the shape of the mandibles the ant evidently stores seeds. This ant differs from the other species of Messor in the fulvous red color and in having the peculiar apical lobe on the mandibles. The antennal scapes are more dilated at the base than in other species.

A COMPARATIVE STUDY OF THE MAXILLÆ OF THE ACRIDIIDÆ (ŒDIPODINÆ AND TETTIGINÆ), PHASMIDÆ AND PHYLLIIDÆ.[1]

By G. C. Crampton.

In attempting to determine the phylogeny and relationships of the Orthoptera-like insects, it has seemed advisable to make a comparative study of the various parts of the head (*i. e.*, the trophi, antennæ, etc.), of the thorax (*i. e.*, the sclerites, appendages, etc.), and of the abdomen (*i. e.*, the cerci, genitalia, etc.); and the present paper dealing with four of the types of maxillæ found in the Orthopteroid forms is offered as one of a series in which the trophi of these insects are discussed, in addition to the various other structures mentioned above. Since no detailed descriptions or figures of the maxillæ of the Phylliidæ, Phasmidæ, and Tettiginæ have been published (so far as I am aware), and since the general scheme of the maxillary structure is practically the same in all Orthopteroid insects, it has seemed preferable to begin the series of articles on the trophi, etc., of the Orthoptera-like forms, with the description of the maxillæ of the above mentioned insects.

The accompanying figures of the maxillæ are necessarily somewhat diagrammatic, since certain structures shown in the figures (*e. g.*, the basal portions of the cardo, etc.) would not be completely visible if sketched from the angle at which the remainder of the figure is drawn. Furthermore, lack of material preserved in al-

[1] Contribution from the Entomological Laboratory of the Massachusetts Agricultural College, Amherst, Mass.